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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,713

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Minoru Yasuike

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MORGAN LEWIS & BOCKIUS LLP  
1111 PENNSYLVANIA AVENUE NW  
WASHINGTON, DC 20004

EXAMINER

LOPEZ, MICHELLE

ART UNIT

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3721

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,713	<b>Applicant(s)</b> YASUIKE ET AL.	
	<b>Examiner</b> Michelle Lopez	<b>Art Unit</b> 3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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### **DETAILED ACTION**

1. This action is in response to the amendment filed on 2/12/09.
2. New claim 5 has been added.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (USPN 6,695,194) in view of Takagi (USPN 6,846,022), and further in view of Taguchi (JP 09-79457).

Chang discloses an end cap (not shown numerically) which is attached to an air-driven tool having an air chamber 11 for reserving compressed air and driven by the compressed air fed from compressed air supply, and to which a hose (not shown numerically) connected to the compressed air supply source is removable jointed (col. 1, lines 12-16), the end cap of the tool comprising: a body attached to the tool's handle 1 and having a first opening for providing communication between an inside and an outside of the air chamber (as shown in fig. 2), and a plug housing housed and mounted in the first opening and having a second opening directed in a first direction along a direction of the first opening of the cap, but fails to disclose an intermediate sleeve having one end held in the second opening and turnable on the first axis and the other end formed with a third opening extending in a second axis direction inclined at a predetermined angle with respect to the first axis; and a plug portion having one end held in the third opening and turnable on the second axis and the other end extending in a direction inclined

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at a predetermined angle with respect to the second axis. Takagi teaches the concept of a universal joint (fig. 7), comprising: a plug housing 202 capable of being attached to a first opening of an end cap body of a tool (col. 1, lines 15-18), and having a second opening directed in a first axis G3 of the first opening; an intermediate sleeve 203 having one end held in the second opening of the plug housing 202 and turnable (about ball bearings 205) on the first axis G3 and the other end formed with a third opening extending in a second axis G1 inclined at a predetermined angle with respect to the first axis G3; and a plug portion 201 having one end held in the third opening (at 203) and turnable (about ball bearings 204) on the second axis G1 and the other end extending in a direction inclined at a predetermined angle with respect to the second axis G1 for the purpose of enabling rotation of the plug portion in any direction in order to change axes of said plug portion in a desired angle (col. 2, lines 9-13). It would have been obvious to have provided Chang's end cap having a plug housing, intermediate sleeve, and plug portion as taught by Takagi in order to facilitate the rotation of the plug portion in a desired angle.

4. Additionally, regarding claim 1, the modified end cap of Takagi fails to disclose wherein an outer diameter of the one end of the plug portion 201 is smaller than an inner diameter of the third opening (at the vicinity of 203). Rather, Takagi's outer diameter of the plug portion 201 is bigger than the inner diameter of the third opening. However, Taguchi shows a joint assembly comprising a plug portion 3 held in an opening of an intermediate sleeve 12 via ball bearing 13, wherein an outer diameter of the plug portion 3 is smaller than an inner diameter of the opening of the sleeve 12 for the purpose of properly changing the angle of the plug portion to a desired angle within the boundaries of the sleeve opening. It would have been obvious to one having

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ordinary skill in the art to have provided the modified invention of Chang further having the outer diameter of the plug portion smaller than the inner diameter of the sleeve's opening as taught by Taguchi in order to change the angle of the plug portion to a desired angle within the boundaries of the sleeve opening.

5. Regarding claim 2, Chung discloses wherein an air plug portion formed integrally with the plug portion and capable of being connected to a socket on the air hose for supplying compressed air from the source (as shown in col. 1, lines 10-12).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (USPN 6,695,194) in view of Takagi (USPN 6,846,022) and Taguchi (JP 09-79457), as apply above in claim 1, and further in view of Yamada et al. (USPN 4,909,419).

The modified invention of Chang discloses the claimed end cap substantially as claimed except for the relieve valve mechanism including a valve member arranged in the end cap body and slidable along the first axis, and a spring for biasing the valve member toward the side of the air chamber. Yamada teaches an end cap attached to an air chamber of an air-driven too, further comprising a relief valve mechanism with a valve member 11 and a spring 13 for exhausting pressurized air within the air chamber to the atmosphere (via port 9). In view of Yamada, it would have been obvious to one having ordinary skill in the to have provided the modified end cap of Chang's and further having a relief valve mechanism as taught by Yamada in order to efficiently release pressurized air within the tool's air chamber to the atmosphere.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (USPN 6,695,194) in view of Takagi (USPN 6,846,022), Taguchi (JP 09-79457), and Yamada et al.

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(USPN 4,909,419), as apply above in claim 3, and further in view of Mukoyama et al. (USPN 6,145,727).

The modified invention of Chang disclose the end cap of an air-driven tool substantially as claimed except for a filter case with a filter to prevent foreign substance from being fed to an inside of the air chamber. Mukoyama teaches the concept of a pneumatic tool comprising an air chamber with an end cap 86 attached therein, wherein the cap has a coupler 86 to be connected to a pressurized air supply via an air hose, and a filter case (at an edge of the cap 86) having a filter member 82a for so that foreign particles may not enter the air chamber (as shown in col. 12, lines 21-31). In view of Mukoyama, it would have been obvious to one having ordinary skill in the art to have provided the modified end cap of Chang further having a filter case and filter as taught by Mukoyama in order to prevent foreign particles may not enter the air chamber.

***Allowable Subject Matter***

6. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments with respect to claim s have been considered but are moot in view of the new ground(s) of rejection.

8. For the reasons above, the grounds of rejection are deemed proper.

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***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Lopez whose telephone number is 571-272-4464. The examiner can normally be reached on Monday - Thursday: 8:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michelle Lopez/  
Examiner, Art Unit 3721

/Rinaldi I Rada/  
Supervisory Patent Examiner, Art Unit 3721